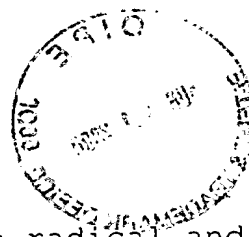
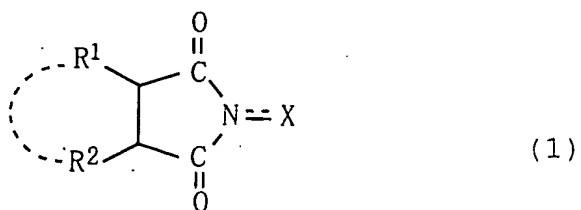


ABSTRACT



(A) A compound capable of forming a stable radical and selected from (A1) oxygen-atom-containing compounds each having a carbon-hydrogen bond at the adjacent position to an oxygen atom, (A2) carbonyl-group-containing compounds, and (A3) compounds each having a hydrocarbon group with a methine carbon atom is allowed to react with (B) a radical scavenging compound selected from, for example, (B1) unsaturated compounds, and (B2) compounds each having a hydrocarbon group with a methine carbon atom, in the presence of molecular oxygen by catalysis of, for example, an imide compound shown by the following formula (1):



wherein each of  $\text{R}^1$  and  $\text{R}^2$  is a hydrogen atom or the like, where  $\text{R}^1$  and  $\text{R}^2$  may be combined to form a double bond, or an aromatic or non-aromatic ring; X is an oxygen atom or a hydroxyl group, to yield a product of an addition or substitution reaction of the compound (A) and the compound (B) or its oxidized product.

The process can efficiently produce a variety of organic compounds by an addition or substitution reaction using molecular oxygen under mild conditions.

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